

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A heat exchanger comprising a plurality of heat transfer plates stacked together such that a plurality of fluid channels are provided therebetween, at least one connecting grid comprising a pair of connecting grid plates separating the plurality of heat transfer plates into groups of heat transfer plates, and at least one fluid connector extending between the pair of connecting grid plates, the fluid connector comprising a tubular body having an outwardly directed flange formed integrally from a wall of the tubular body to sealingly connect the tubular body to a fluid channel between a first group of heat transfer plates on one side of the connecting grid via an opening in one of the connecting grid plates, wherein the opening is provided in a structural ring received in an aperture in a first connecting grid plate of the pair of connecting grid plates.
2. (Original) A heat exchanger as claimed in Claim 1 wherein, the flange is produced integrally with the tubular body by deforming an end portion of the tubular body.
3. (Withdrawn) A heat exchanger as claimed in Claim 1 wherein, the flange provides a fluid tight connection with a plate of the connecting grid.
4. (Cancelled)
5. (Currently amended) A heat exchanger as claimed in Claim [[4]]1 wherein, the structural ring permits the fluid connector to be detached without disassembling the connecting grid.
6. (Currently amended) A heat exchanger according to Claim [[4]]1 wherein, a set of interchangeable structural rings having different sizes of openings are provided for selective fitment in the aperture for connecting different sizes of fluid connectors.
7. (Currently amended) A heat exchanger as claimed in Claim [[4]]1 wherein, the structural ring provides an opening coaxial with the aperture in the first connecting grid plate.
8. (Withdrawn - Currently amended) A heat exchanger as claimed in Claim [[4]]1 wherein, the structural ring provides an opening eccentric to the aperture in the first connecting grid plate.

9. (Withdrawn) A heat exchanger as claimed in Claim 8 wherein, means is provided to assist rotational alignment of the structural ring during assembly.
10. (Withdrawn) A heat exchanger as claimed in Claim 9 wherein, the alignment means comprises co-operating formations.
11. (Withdrawn) A heat exchanger as claimed in Claim 9 wherein, the alignment means comprises marks to assist visual alignment of the structural ring.
12. (Currently amended) A heat exchanger as claimed in Claim [[4]]1 wherein, a seal provides a fluid tight connection between the flange and the structural ring.
13. (Original) A heat exchanger as claimed in Claim 12 wherein, the seal comprises an annular sealing ring received in a groove in one of the flange and structural ring.
14. (Withdrawn – Currently amended) A heat exchanger as claimed in Claim [[4]]1 wherein, the structural ring is made of elastomeric material providing a fluid tight connection to the flange.
15. (Previously presented) A heat exchanger as claimed in Claim 1 wherein, the fluid connector provides an inlet/outlet connection externally of the heat exchanger.
16. (Cancelled)
17. (Cancelled)
18. (Cancelled)
19. (Currently amended) A heat exchanger as claimed in Claim 1 wherein, the fluid connector comprises a further outwardly directed flange formed integrally from a wall of the tubular body to sealingly connect the tubular body to a fluid channel between a second [[the]] group of heat transfer plates on the other side of the connecting grid via an opening in the other of the connecting grid plates.
- 20-22 (Cancelled)

23. (Previously Presented) A heat exchanger as claimed in Claim 19 wherein, a blanking disc is provided for closing the opening in one of the connecting grid plates.

24. (Original) A heat exchanger as claimed in Claim 1 wherein, the tubular body is formed from thin gauge tube or pipe having a nominal diameter to wall thickness ratio within the range of 20 to 70.

25. (Cancelled)

26. (Withdrawn) A method of forming a fluid tight connection between a connecting grid of a heat exchanger and a fluid connector comprising the steps of forming a fluid connector by providing a tubular body and deforming an end region of the tubular body to form an outwardly directed flange, and connecting the fluid connector to the connecting grid so that the tubular body is in fluid communication with at least one fluid channel of the heat exchanger via a fluid tight connection of the flange to the connecting grid.

27. (Withdrawn) A connecting grid for a heat exchanger, the connecting grid having an opening in a plate, and an insert received in the opening for adapting the connecting grid to close the opening or to connect a fluid connector to the heat exchanger.

28. (Withdrawn) A connecting grid according to Claim 27 wherein, the insert is one of a blanking disc to close the opening and a structural ring to connect the fluid connector to the heat exchanger.

29. (Withdrawn) A connecting grid according to Claim 28 wherein, a set of interchangeable structural rings are provided for mounting in the opening with each ring having an opening of different size and/or at a different position for converting the opening to the size and/or position of the fluid connector.

30. (Withdrawn) A set of inserts for use with a connecting grid, each insert having an aperture therein and being interchangeable for selective fitment in an opening in a plate of the connecting grid, wherein the apertures are of different size and/or positions for adapting the connecting grid for connection to a fluid connector.

31. (Withdrawn) An adapter for detachably attaching a fluid connector to a connecting grid, the adapter comprising an insert adapted to be received in an opening in a plate of the connecting grid whereby a fluid connector can be detachably connected to the connecting grid via the insert.

32. (Previously presented) A heat exchanger comprising a plurality of heat transfer plates stacked together such that a plurality of fluid channels are provided therebetween, at least one connecting grid separating said plurality of heat transfer plates into groups of heat transfer plates, and at least one fluid connector comprising a tubular body having an outwardly directed flange formed integrally from a wall of said tubular body to sealingly connect said tubular body to a fluid channel between a first said group of heat transfer plates on one side of said connecting grid via an opening in said connecting grid, wherein said opening is formed in a detachable structural ring received in an aperture in said connecting grid, and a set of interchangeable structural rings is provided for selective fitment in said aperture for connecting the connecting grid to different sizes of fluid connectors.

33. (Previously presented) A heat exchanger comprising a plurality of heat transfer plates stacked together such that a plurality of fluid channels are provided therebetween, at least one connecting grid comprising a pair of plates separating the plurality of heat transfer plates into groups of heat transfer plates, and at least one fluid connector extending between said pair of connecting grid plates, said fluid connector comprising a tubular body having an outwardly directed flange formed integrally from a wall of the tubular body to sealingly connect said tubular body to a fluid channel between a first said group of heat transfer plates on one side of said connecting grid via an opening in one of said connecting grid plates, wherein said opening is formed in a structural ring received in an aperture in said connecting grid, and an annular sealing ring is received in a groove in one of said flange and said structural ring to provide a fluid tight connection between said fluid connector and said connecting grid.

34. (Previously presented) A heat exchanger comprising a plurality of heat transfer plates stacked together such that a plurality of fluid channels are provided therebetween, at least one connecting grid comprising a pair of plates separating the plurality of heat transfer plates into

groups of heat transfer plates, and at least one fluid connector extending between said pair of connecting grid plates, said fluid connector comprising a tubular body having first and second outwardly directed flanges formed integrally from a wall of the tubular body, said first outwardly directed flange sealingly connecting said tubular body to a fluid channel between a first said group of heat transfer plates on one side of said connecting grid via an opening in one of said connecting grid plates, said second outwardly directed flange sealingly connecting said tubular body to a fluid channel between a second said group of heat transfer plates on the other side of said connecting grid via an opening in the other of said connecting grid plates, and a detachable blanking disc for selective fitment in one of said openings in said connecting grid plates to close the fluid connection to one of said first and second groups of heat transfer plates.

35. (New) A heat exchanger comprising a plurality of heat transfer plates stacked together such that a plurality of fluid channels are provided therebetween, at least one connecting grid comprising a pair of connecting grid plates separating the plurality of heat transfer plates into groups of heat transfer plates, and at least one fluid connector extending between the pair of connecting grid plates, the fluid connector comprising a tubular body having a first outwardly directed flange formed integrally from a wall of the tubular body to sealingly connect the tubular body to a fluid channel between a first group of heat transfer plates on one side of the connecting grid via an opening in one of the connecting grid plates and a second outwardly directed flange formed integrally from a wall of the tubular body to sealingly connect the tubular body to a fluid channel between a second group of heat transfer plates on the other side of the connecting grid via an opening in the other of the connecting grid plates.

36. (New) A heat exchanger as claimed in Claim 35 wherein, a blanking disc is provided for closing the opening in one of the connecting grid plates.